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2005 JUL 13 P 3:52

CORRESPONDENCE CONTROL

Revised 05/05

CORRES. CONTROL INCOMING LTR NO.	
00482 RF 05	
DUE DATE	
ACTION	00362-RF-05

DIST.	LTR	ENC
BERARDINI, J.H.	X	X
BOGNAR, E.S.	X	X
BROOKS, L.	X	X
CARPENTER, M.	X	X
CIUCCI, J.A.		
CROCKETT, G. A.	X	X
DECK, C. A.	X	X
DEGENHART, K. R.	X	X
DEL VECCHIO, D.		
FERRERA, D. W.	X	X
GIACOMINI, J. J.		
GILPIN, H.		
LINDSAY, D. C.	X	X
LONG, J. W.		
NESTA, S.		
SHELTON, D. C.	X	X
TUOR, N. R.	X	X
WARD, D.	X	X
WIEMELT, K.	X	X
ZAHM, C.	X	X
[illegible]	X	X
COR. CONTROL	X	X
ADMIN. RECORD	X	X

Reviewed for Addressee
Corres. Control RFP
7/13/05 By [illegible]
Date
Ref. Ltr. #

DOE ORDER # 5400.1

Department of Energy

ROCKY FLATS PROJECT OFFICE
12101 AIRPORT WAY, UNIT A
BROOMFIELD, COLORADO 80021-2583

JUL 0 6 2005

05-DOE-00419

Mr. Steve Gunderson
RFCA Project Coordinator
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South, OE-B2
Denver, CO 80246-1530

Mr. Mark Aguilar
Rocky Flats Team Lead
United States Environmental Protection Agency, Region VIII
999 18th Street, Suite 500
Denver, CO 80202-2466

Dear Mr. Gunderson and Mr. Aguilar:

Pursuant to the Rocky Flats Cleanup Agreement (RFCA), Attachment 5, Rocky Flats Environmental Technology Site (Site) Action Level and Standards Framework for Surface Water, Groundwater, and Soils (ALF), Section 2.4 (B), the Department of Energy (DOE), Rocky Flats Project Office (RFPO) is notifying you of water quality monitoring results at the RFCA Point of Evaluation (POE) surface water monitoring station location GS10, which is located in the South Walnut Creek drainage upstream of Pond B-1 in the Walnut Creek basin.

This letter provides notification of newly observed reportable concentrations of total chromium in surface water at RFCA POE GS10, and to provide an outline of proposed source evaluation and mitigation efforts in response to water quality monitoring results. The calculated 30-day moving average for total chromium (Cr) triggered the reporting requirements under RFCA Attachment 5, Section 2.4 (B) for the period March 23, 2005 through April 10, 2005 inclusive, using validated data (Table 1). As of April 11, 2005, the 30-day average for Cr is no longer reportable and individual sample results show a decreasing trend with the completion of Functional Channel construction in mid-April. Analytical results for all samples that were used in the calculation are listed in Table 2. The RFPO gained knowledge of the reportable value on June 22, 2005. Preliminary notice was also given to the RFCA Project Coordinators. This was accomplished via email on June 24, 2005. In addition, other Site stakeholders, including the Rocky Flats Coalition of Local Governments, the Rocky Flats Citizen Advisory Board, and the Cities of Westminster and Broomfield, and Congressional staffs, were also notified via email on June 24, 2005.

ADMIN RECORD

SW-A-005101

1/6

Table 1 – Reportable 30-Day Average Values for RFCA POE Monitoring Location GS10 Using Validated Data

Analyte	Dates of Reportable Value	Range of Reportable 30-day Avg. Values (ug/l)
Chromium	3/23/05 – 4/10/05	50.5 – 64.7

Table 2 – Analytical Results for Composite Samples Collected at GS10 Used in the 30-Day Average Calculations (Validated through 3/14/2005 Sample).

Composite Sample Start Date	Chromium Analytical Result (ug/l)
2/1/2005	48.2
2/24/2005	34.4
3/14/2005	80.1
4/11/2005	30.1
4/12/2005	17.2
4/13/2005	19.8
4/25/2005	3.9

RFCA Reporting Protocol

To meet the RFCA commitment, DOE must transmit more comprehensive information to the Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) within the 15-day reporting period, which ends July 7, 2005. In addition, RFCA also requires that the DOE, within 30 days of gaining knowledge of the reportable results, submit to EPA and CDPHE a source evaluation plan addressing this reportable period. This letter serves as a preliminary source evaluation, based on consideration for other evaluative work already performed in this drainage. This letter provides the information needed for the transmittal of more comprehensive information and also provides the plan for source evaluation, as needed for the 30-day reporting requirement. An updated source evaluation letter will be completed within 30-days of this notification.

Downstream Water Quality Monitoring

Water flowing through GS10 also passes through the lower B-series ponds (Ponds B-4 and B-5) and South Walnut Creek before leaving the Site. RFCA Points of Compliance (POCs) GS08 (Pond B-5 outlet) and GS03 (Walnut Cr. at Indiana St.) again monitor this water; however neither location's samples are analyzed routinely for chromium. GS10

analytical results and the reportable 30-day average values were compared with those from pre-discharge samples collected from Pond B-5 prior to the March and April/May 2005 direct discharges (3/15 – 3/31/05 and 4/30 – 5/19/05). Monitoring results from Pond B-5 (pre-discharge samples) met all applicable water-quality criteria prior to discharge.

Preliminary Water-Quality Evaluation

Total chromium concentrations were identified as a parameter to indicate possible high levels of chromium. When the lab-reported total chromium concentrations were initially observed, Kaiser-Hill completed a preliminary evaluation of GS10 water-quality data. Past total chromium results at GS10 show numerous values in the 20-50 ug/l range. These results generally show seasonal increases coinciding with increased spring/summer runoff rates and the corresponding increases in total suspended solids (TSS). Attachment 1 shows a reasonably good correlation between increasing TSS and increasing chromium concentrations at GS10.[1] Similar relationships have been observed at other Site surface-water monitoring locations. These correlations also exist for metals such as aluminum, cobalt, copper, iron, lead, manganese, nickel, vanadium, etc. suggesting that naturally occurring concentrations of these metals are increased when sediment transport increases.

The area upstream of GS10 has been experiencing significant soil disturbances and increased traffic loads due to the wholesale demolition of structures, construction of functional channels, culvert removals, and transport of debris in those areas. Most significant has been the construction of Functional Channels 4 and 5. It should be noted that the 3/14 – 4/11/05 composite sample from GS10 was collected entirely during this construction and the associated water management using coffer dams, pumps, and temporary ditches.

The persistent observations of correlated unfiltered chromium and TSS increases, along with the significantly increased soil disturbances this year suggest this event is likely to be another example of the frequently observed seasonal events. The maximum observed sample concentration is only 60 percent or so higher than has been observed previously, similar to the increases seen in TSS in the drainages during the drainage reconstruction. While some investigation remains in order to understand the details of this event, the general trend suggests that continued use of aggressive erosion control measures is appropriate at this time.

[1] TSS is only available for samples collected within the 7-day hold time for TSS analyses.

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Recommendation

In consideration of the preliminary analysis given above, and the similar characteristics of this event compared to previous sample results, the RFPO does not believe a more comprehensive search for new source contributions is warranted. Based on the abbreviated data evaluation included herein, increased solids transport in association with Site closure is the probable cause of the reportable Cr values at GS10. The RFPO proposes the following in response to these reportable values at GS10:

(1) A more comprehensive data evaluation including collecting grab samples related to GS10 will be completed. A plan to characterize the chromium in the drainage will be developed by mid-July 2005. The resulting letter report will include an updated GS10 source evaluation summary using all available data at the time of publication. This evaluation will include a detailed monitoring summary, an analysis of water-quality correlations, an evaluation of metals data from other surface-water and soil sampling locations, and an assessment of Decontamination and Decommissioning (D&D), Environmental Restoration, and Site Closure project activities within the GS10 drainage that could have influenced the surface water quality in the sub-drainages. Should review of subsequent data raise issues not currently being considered, additional evaluation would be necessary.

(2) Continued routine monitoring as required by RFCA and the Site Integrated Monitoring Plan.

(3) Continued application and maintenance of comprehensive erosion controls and revegetation measures within the areas tributary to GS10 and other drainages as an integral part of Site closure.

If you have any questions on this transmittal, please contact me at 303-966-6246.

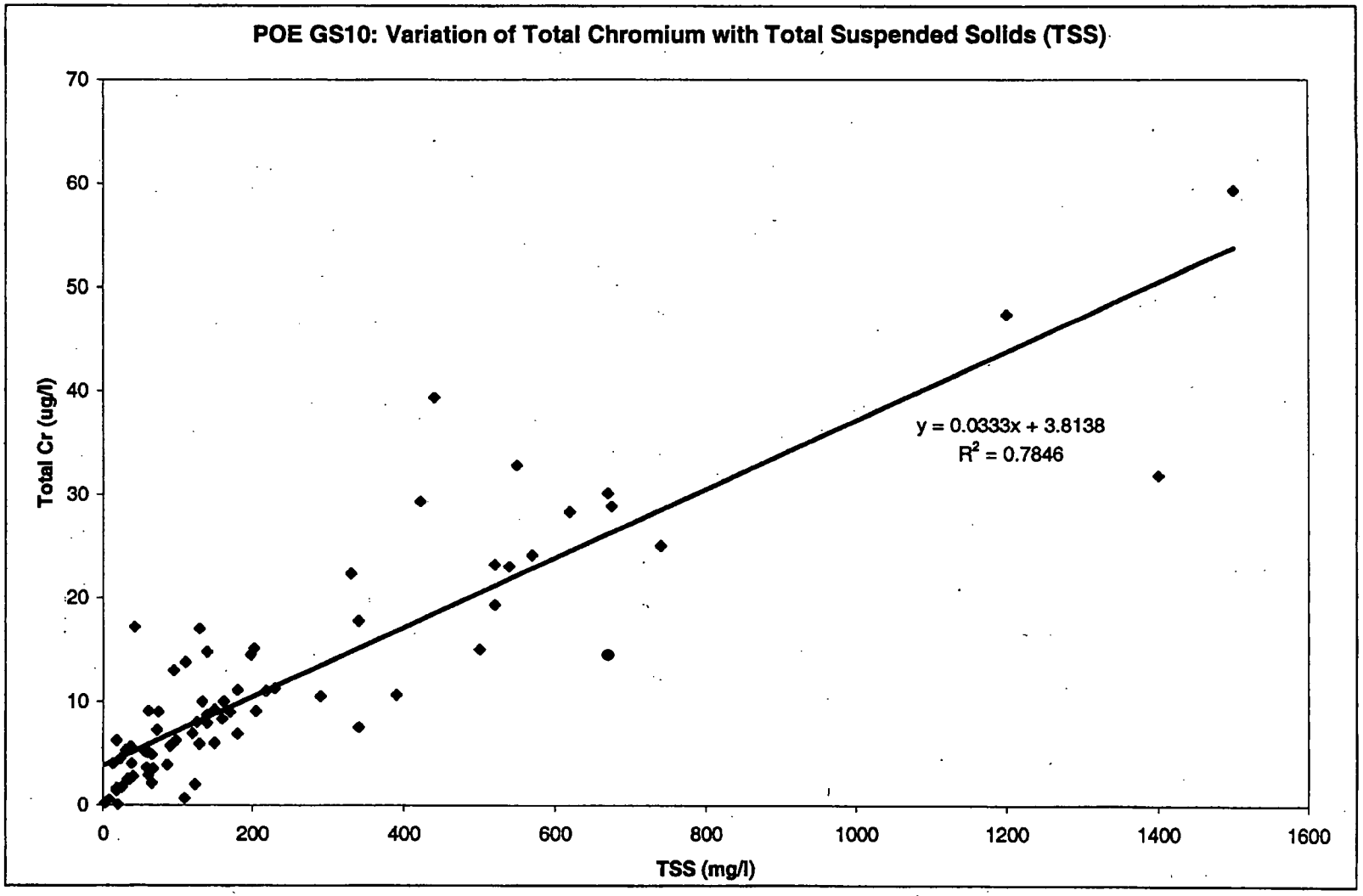
Sincerely,

John J. Rampe, Director
RFPO Closure Project Management

Enclosures

4

cc w/Att:
R. Schassburger, CPM
M. Roy, OCC
D. Shelton, K-H
R. Nininger, K-H
L. Brooks, K-H
A. Nelson, City of Westminster
S. Garcia, City of Broomfield
C. Johnson, City of Arvada
V. Lucero, City of Thornton
S. Stanley, City of Northglenn
Administrative Record


POE GS10: Variation of Total Chromium with Total Suspended Solids (TSS)
Total Cr (ug/l)
TSS (mg/l)
y = 0.0333x + 3.8138
R2 = 0.7846
0
10
20
30
40
50
60
70
0
200
400
600
800
1000
1200
1400
1600